

LAKE ILO REFUGEI. GENERALA. Weather Conditions.

Total precipitation for the period was above normal, due entirely to the large amount received in September. October precipitation was slightly above average while that for November and December was far below average.

Temperatures were above normal during most of the period. Monthly maximums occurred as follows; September 1 - 100°; October 22 - 71°; November 7 - 70° and December 23 - 55°. The coldest day was December 31 with - 9° F.

Weather data for the period and for corresponding periods in 1953 and 1952 are as follows;

Year	Month	Snowfall	Precip.	20-year ave. Precipitation	Temperatures	
					Max.	Min.
1954	Sept.	--	2.78	1.29	100	26
	Oct.	2.0	0.80	0.77	71	17
	Nov.	1.0	0.09	0.56	70	8
	Dec.	1.0	0.08	0.45	55	-9
	Total	4.0	3.75	3.07 Extreme	100	-9
1953	Sept.	--	0.84		89	24
	Oct.	--	1.33		96	20
	Nov.	trace	0.03		69	6
	Dec.	4.0	0.47		46	-15
	Total	4.0	2.67	Extreme	96	-15
1952	Sept.	--	1.28		89	23
	Oct.	--	0.12		78	5
	Nov.	4.0	0.34		68	-2
	Dec.	--	--		48	-3
	Total	4.0	1.74	Extreme	89	-3

B. Water Conditions.

The water level of Lake Ilo was nine inches below spillway crest on September 1 and the ice level was 11 inches below on December 31. This is the same water level as last year on December 31.

The lake froze over on November 29 with the exception of a small hole kept open by the ducks. This hole opened up to approximately 30 acres early in December and froze over again the latter part of December. The date of freezeup in 1953 was December 2; 1952 - Nov.21;

1951 - November 2; and 1950 - November 8.

Ice measurements were as follows; December 4 - 2 inches; December 15 - 6 inches; December 25 - 6 inches; and December 31 - 8 inches.

C. Fires. None.

II. WILDLIFE.

A. Migratory Birds.

1. Population and Behavior.

Approximately 7970 ducks and 2000 coots were on the refuge on September 1 for a total of 9970. Waterfowl numbers remained about the same until the last part of September, when they had increased to 11,570 ducks and 3000 coots. Waterfowl increased to 15,730 in early October; numbers then decreased as most species began to leave. Mallard started piling in during early November and the peak concentrations for the fall migration occurred November 14 to 20 when 41,500 ducks were on the refuge. From 40,000 to 20,000 Mallards were present on the refuge during November. The first week of December there were 12,000 Mallards on the refuge, but this number decreased to 2000 by December 31.

The peak concentration this year was above average for Mallards, but below average for other ducks, with the exception of Green-winged Teal, Blue-winged Teal and American Widgeon. Total waterfowl use-days this year was 1,703,142; last year's was 799,250. Mallard use-days this year were 1,302,000; last year's 477,550.

A number of White Pelicans, Sandhill Crane and Double-crested Cormorants used the area during September and October.

Shorebirds appeared to be fewer in number this fall.

2. Food and Cover.

The food for field-feeding ducks was very good due to the good corn crop.

B. Upland Game Birds.

It is estimated that 350 Ring-necked Pheasants are using the refuge this winter; this is approximately a third more than last winter.

More Sharp-tailed Grouse have been seen on the refuge than usual - especially during the latter part of the period. Their numbers are generally low in the vicinity of the refuge however. Large numbers are present in and near the Badlands.

A few more European Partridge have been observed on the refuge this period than in the past few years. It is believed their numbers have increased this last year.

2. Food and Cover.

Food and cover are adequate for the number of upland game birds present.

C. Big Game.

Several Mule Deer were seen on the refuge during the period. Five Antelope were seen on the refuge at times this summer and one is still present.

No deer have been seen on the refuge since the deer season however. It is believed the Mule Deer population was the largest ever in southwestern North Dakota this year. It is also believed that the deer harvest was the largest ever had.

One bull Elk was seen on the refuge October 2, swimming across the lake. This animal probably strayed from the small herd in the Killdeer Mountains 20 miles northwest of the Refuge.

D. Fur Animals, Predators, Rodents and other Mammals.

The Muskrat population is estimated to be approximately 200. There were 22 animals trapped; of these four were destroyed in the trap by mink. 18 were divided; 9 each for trapper and refuge share.

Eight Mink were trapped on the refuge and divided on a 50-50 basis. Six of them were females. It is believed only a few Mink are present now. An estimated 30 Mink were trapped in the immediate vicinity of the refuge.

No Weasels were trapped and only one was seen on the refuge this period. It is believed their number is small.

Fourteen Skunks were trapped on the refuge. The population of this species is also small.

Some signs of Raccoon were observed on the refuge but none were trapped.

Two Beaver were trapped and destroyed before the trapping season; they were cutting trees in the recreational area. None are present on the refuge at the close of the period.

One Fox was shot this period, and ten last spring, near the refuge. Although none were taken by the trapper, a few have been seen on the refuge this period; it is estimated six are present.

E. Predacious Birds, including Crows, Ravens, Magpies.

The usual number of Hawks ~~was~~ present during the period, consisting of Marsh Hawks, Swainson's and Rough-legs. Several Prairie Falcons and Golden Eagles have been using the refuge this winter; they feed on the ducks wintering here to some extent.

Very few Crows used the refuge this fall. No Magpies have been seen this period.

More Snowy Owls and Horned Owls were present this period than usual. Ten Snowy Owls were seen at one time on the refuge shortly after freezeup. Four Horned Owls were seen at one time in ^{the} recreational area.

F. Fish.

Fishing was fair in the lake this period. The summer fishing season closed September 15; winter fishing started December 15. The winter season is open on all species, with the exception of Northern Pike and Walleyed Pike, under state regulations. We would prefer that the season also be open on Northern Pike as it would help to keep the population down. A large number of small northerns ~~have~~ been caught measuring 12 inches. It is believed that the northern population will be very large in a few years. The Yellow Perch taken this winter have been larger than they have been for a number of years; they measure from 7 to 13 inches.

III. REFUGE DEVELOPMENT-MAINTENANCE.

A. Physical Developments.

1. Installed new gasoline storage tank at headquarters, painted and tested tank.
2. Poured concrete floor in basement and for step in front of outside door of the new addition of the residence. Painted outside green trim on residence.
3. Hauled and placed 235 cubic yards of rock on south downstream wall of spillway.
4. Measured and collected for hay harvested on refuge.
5. Maintained refuge road two times; mowed weeds along refuge road.
6. Mowed weeds on dam and along county roads on refuge boundary.
7. Made minor repairs to Diamond-T truck, Dodge dump truck, IHC pickup and F-30 tractor and front end loader.
8. Constructed 380 rods of new fence on refuge boundary. Mr. Hemings of R. O. surveyed land tracts 7 and 12 that were fenced this fall.
9. Hauled coal for heating garage and office.
10. Issued trapping permits and divided furs.
11. Made two trips to Long Lake Refuge; one to borrow dump truck for rock hauling and one to return it.
12. Observed wildlife, checked waterlevels and structures.
13. Patrolled around refuge and vicinity during hunting season.
14. Drove Diamond-T truck to Des Lacs for repair and returned with new Dodge pickup that had been picked up at Detroit by Des Lacs personnel.

B. Plantings.

1. Aquatics and Marsh Plants. None.
2. Trees and Shrubs.

950 miscellaneous deciduous trees and shrubs and 26 Colorado Green and Black Hills Spruce were planted last spring. The deciduous

trees and shrubs were donated by the Soil Conservation Service from excess stock on hand.

4. Cultivated Crops.

No crops were planted by refuge personnel. 75 acres of wheat, barley, corn, oats and flax were planted by permittees this season under cooperative agreement. The refuge share of corn was left standing and the refuge share of barley was harvested. See NR-8 for details.

C. Collections. None.

D. Receipts of Seed and Nursery Stock.

950 miscellaneous deciduous trees and shrubs were received from the local Soil Conservation District. This was excess stock in fair to poor condition. 26 Colorado Green and Black Hills Spruce were obtained from the C. L. Jensen Nursery at Esmond; this was excellent stock, received in good condition.

IV. ECONOMIC USES.

A. Grazing.

One permit was in force this year. 20 AUM's were utilized yielding a revenue of \$20.00

B. Haying.

Two haying permits were issued to local farmers; 42 tons were harvested with a cash return of \$63.00.

V. FIELD INVESTIGATION OR APPLIED RESEARCH.

None.

VI. PUBLIC RELATIONS.

A. Public Uses.

1. Hunting Use. None.
2. Fishing Use. Approximately 3000 visitor-days for the year.
3. Miscellaneous Uses. An estimated 2000 visitor-days for the year. The recreational area, which is under the management of the Dunn County Park Board, was maintained in good order.

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B. Visitors.

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
9/22	Mr. Henderson Mr. Putshler	State Highway Department	Borrow pair of boots to check bridge footing.
10/12	Mr. Donohoe	Local farmer - permittee	Hay harvested on refuge
10/28	Howard S. Huenecke Frank Hemings	Manager, Des Lacs Refuge Branch of Engineering, Mpls.	Land survey.
10/12	Howard S. Huenecke	Manager, Des Lacs Refuge	Deliver fencing materials, pick up load of barley & discuss work plans.
11/2	Bill Kault	Parshall, N. D.	Visit
11/15	John Bray	Trapper, Dunn Center, N.D.	Re trapping on refuge
11/22	Mr. & Mrs. B.Kault	Parshall, N. D.	Visit
11/22	Henry Nickolson	" "	Visit
12/10	Mr. Hickling	Habitat Development Leader, State Game & Fish Dept. Dickinson, North Dakota	Tree planting on refuge.
12/11	Mr. Klunt Mr. Meisch & 2 Representatives of the Mo. Valley Council of Boy Scouts	Dunn Center, N. D. Dunn Center, N. D. Bismarck, N. D.	To look over park for camping site.

C. Refuge Participation. None.

D. Hunting.

No hunting is allowed on the refuge.

Duck hunting, that is field shooting, was very good considering the weather; there were only two stormy days during the entire season. Morning shooting was quite good but there was little evening shooting as the ducks went out too late most of the time.

A very large number of Mallards was present in southwestern North Dakota from the latter part of October until the first part of December. It is believed this was the largest concentration of Mallards in this area, for the longest period, for many years. It is believed the nice weather and good corn crop were the reasons for their staying so long.

Hunting pressure was light; for some reason the hunters did not seem to go for the early morning hunting.

Upland game hunting was fair. There were more hunters than birds. The season was short and bag limits small. There is a good number of birds left for breeding stock.

Deer hunting was very good in western North Dakota. It is believed the number of hunters was the largest ever in this area. The deer population was possibly the largest in history and more deer were killed this season than ever before. There was an eight and a half day season on White-tailed Deer and the last two days were open for Mule Deer. On the opening day 3000 hunters passed through one checking station near Grassy Butte, 30 miles west of the refuge. It was reported that a large number of Mule Deer were killed during the White-tail season and left in the field.

E. Fishing.

An average number of fishermen used the area during the first 15 days of September, prior to the closing of the summer season. Winter fishing opened on December 15 in accordance with refuge and state regulations. Fewer winter fishermen were present due to the thin ice on Ilo and the fact that there were more winter fishing areas open elsewhere in the state. According to reports the fishing at Lake Ilo was much better than at the other fishing spots. It has been estimated that 5000 Perch have been taken between December 1 and 31. The Perch are the largest since the 1951 freezeout; a good number measure 11 to 13 inches in length. The season is closed on Northern and Walleyed Pike. A number of these have been caught, especially Northerns, measuring 12 inches in length. The larger ones are eight pounds and over.

It is believed we should try to have the State Game and Fish Department open the season on Northern Pike during the next winter season. The summer seasons on the refuge are too short to keep the northerns from becoming over-populated. Lake Ilo is one of the few places in the state that ~~is~~ not open to the taking of Northern and Walleyed Pike.

F. Violations.

No violators apprehended.

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DISTRICT IV. EASEMENTSHIDDENWOODI. General.

This area was visited once during the period, on October 20. The water level has been higher this year than in the past, but not as high as last year. It appears that there was considerable use of the area for boating this fall.

II. Wildlife.

The following birds were observed on October 20: 150 Mallard; 30 Canvasback; 10 Redheads and 30 Coot. The water level was two inches above the outlet culvert. The culvert had been plugged again and the plug was removed.

No upland game birds were seen on the area, although a few undoubtedly are present. A number of Ring-necked Pheasants were seen near the refuge.

III. Physical Developments.

Boundary markers were replaced, water levels checked and plug removed from culvert.

LAKE PATRICIAI. General.

This area is jointly administered by the Fish and Wildlife Service and the State Game and Fish Department. It is used considerably by the State as an experimental study area. Action has been initiated to permit the State to take over the entire area, but no recent developments have occurred on this.

Precipitation in this area was about average. Grain crops were fair and corn was good.

The Waterlevel was above normal.

II. Wildlife.

When the area was visited on November 20 and 21 approximately 15,000 Mallards were present. Local people indicated waterfowl use had been high all fall and that hunting had been very good.

It was estimated that 150 Ring-necked Pheasants were on the refuge during the period. Hunting pressure was heavy on upland birds in this area. There were two pheasant seasons in this part of the state; the first from October 30 to November 7 and the second from November 20 to 28; bag limits were three and six. There was considerable local opposition to the second season and over 50 percent of the land was posted for no hunting. There was a very large number of hunters in the vicinity of the refuge on November 20 and 21.

A few Sharp-tailed Grouse and European Partridge are using the refuge.

LEGION LAKE

This area has been abandoned by the Service as it is to be flooded by the Garrison Reservoir. All refuge boundary markers were removed on October 26. Land clearing operations were started in early November by the Corps of Engineers.

McLEAN

I. General.

Rain fall was about average for the period. Crops were poor, however, due to rust and dry weather last period.

The water levels were good during the period - nine inches below at beginning of period and one inch below on October 19. It is believed the waterlevel at the time of the freezeup was only a few inches below spillway crest.

II. Wildlife.

Approximately 300 Mallards, 20 Canvasbacks and 150 Coots were present on October 19. It was reported that the usual number of waterfowl used the area later on during fall migration. No upland game birds were seen on the area during the period but it is believed a few are present.

The Muskrat population appeared to be about the same as last year; there is a large population for the size of the area. A few Mink signs were noted and it is believed a few are using the area.

A trapping permit was issued to a farmer living near the refuge. No report as to catch has been received to date.

III. Physical Developments.

1. Burned weeds on dike, filled holes and placed rock.
2. Checked refuge markers.
3. Checked water levels, made a survey of Muskrat and Mink populations and issued trapping permit.

PRETTY ROCK

I. General.

Precipitation and snow fall were below average for the period. The water level was two feet below spillway crest at the beginning of the reporting period and three feet below at the close of the period; this is the lowest water level for several years.

Crops were fair in this vicinity, corn was better than average.

II. Wildlife.

More Mallards used the area during fall migration than usual. When visited on November 3 and 4 10,000 Mallards, 500 Pintails, 75 Scaup, three Golden Eagles and 100 Pheasants were observed. On November 21 20,000 Mallards and 30 Pheasants were noted.

One trapping permit was issued to a farmer living on the refuge. No report received to date.

The Muskrat population is smaller than usual due to low water level. Some Mink sign was observed.

Pheasant hunting was very good in this vicinity, especially during the first season. The hunting pressure was very heavy. It is believed the Pheasant population was almost as large as it was during the early forties. 300 cock Pheasants were seen on two quarters of land near the refuge on November 21.

Duck hunting, mainly corn field shooting, was considered good.

No Sharp-tailed Grouse or European Partridge were seen on the refuge but it is believed a few are present.

III. Physical Developments.

1. Mowed weeds on dam and in spillways.
2. Placed rock below spillway.

3. Filled holes on dam.
4. Observed birds, made survey of muskrat and mink populations, checked structures and waterlevels.
5. Contacted farmer living on refuge and issued trapping permit.
6. Patrolled around refuge during hunting season.

STEWART LAKE

I. General.

Rainfall was below average during the period in this vicinity. Poor small grain crops were harvested but there was a fair corn crop. Most of the corn was left standing and grazed off by cattle which made excellent duck feeding conditions.

The water level was approximately one foot below spillway crest at the beginning of the period and receded to eighteen inches by the close of the period.

II. Wildlife.

When visited on September 29 the following birds were observed: One Snow Goose; 600 Mallards; 200 Pintails; 200 Widgeons; 200 Blue-winged Teal; 75 Ruddys; and three Great Blue Herons.

On October 22 the following were observed: 3,000 Mallards; 400 Pintails; 200 Coot; and one White-fronted Goose. On October 27, 28 and 29 an estimated 4,000 Mallards and one White-fronted Goose were present.

When visited on December 20 the lake was frozen over except for a small hole near the center kept open by ducks. 800 Mallards were present and one Golden Eagle. The ice was six inches thick at that time.

60 Ring-necked Pheasants were seen on the refuge on October 28. We were informed by a local farmer, Mr. Brooks, that this was the largest number of Pheasants that he has seen on his land for several years.

A few Sharp-tailed Grouse were seen and it is believed a good number are using the refuge. A few Huns are also using the area.

A few Muskrat and Mink are present but it is believed their number is small. Two trapping permits were issued to local farm boys.

A number of Antelope and Mule Deer used the area during the period. It is believed the deer population was the largest before the season than ever in the past. A large number was taken during the season in this vicinity. One rancher living four miles north of the refuge, who controls 20 sections in one block, did not allow any hunting on his land; it was estimated that 200 to 300 deer were on that area.

III. Physical Developments.

1. Hauled and placed 180 cubic yards of gravel in spillway and on face of dam.
2. Leveled and placed rock in spillway.
3. Observed birds, checked structures and water levels.
4. Issued trapping permits and contacted farmers living on and near refuge in regard to refuge work and wildlife.
5. Checked and repaired refuge markers.

WHITE LAKE

I. General.

Rain fall and snow fall were below average during the period. Very poor crops were harvested in this area. The water level was higher than usual during the period despite the low precipitation. The water level was approximately level with the spillway crest at the beginning of the period and receded to ten inches below by the time of freezeup. The ice was six inches thick when checked on December 20. A small hole was open near the center of the lake; kept open by ducks.

II. Wildlife.

On September 29 the following birds were observed; 1500 Mallards; 600 Pintails; 400 Blue-winged Teal; 200 Widgeons; 50 Shovelers; 60 Gadwalls; 20 Ruddys; 100 Coot; two Great Blue Herons and six Marsh Hawks. On October 22 500 Mallards were seen. During the period October 27-29 5,000 Mallards were on the area. On November 11 and 12, during deer season, an estimated 15,000 Mallards were present. When visited on December 20 150 Mallards were using the area.

It is believed more waterfowl used the area during fall migration than in the past few years. A number of White-fronted and Snow Geese were present during October. Several White-fronted Geese were shot by hunters in the vicinity of the refuge.

A few Pheasant were seen on the refuge during the period. It is believed more are using the area than there have been the past few years. No Sharp-tailed Grouse or Huns were seen but it is believed a few are using the area.

A few signs of Muskrat, Mink and Skunk were noted on the refuge and it is estimated the usual number are present. A trapping permit was issued to a farmer living on the refuge. No report as to take has been received to date.

A few deer and antelope used the area during the period.

III. Physical Developments.

1. Structures, refuge markers and water levels were checked.
2. Wildlife observed and trapping permit issued.

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Note: The above report on Lake Ilo and District IV Easements was submitted by Mr. Chesley M. Dinkins, Refuge Aid in charge at Ilo. Editing and some data were supplied by the Refuge Manager.

Mr. Dinkins is to be commended for the good work he has done in the management and care of Lake Ilo and the District IV Easements.

Forms NR-1 are included for Pretty Rock, Stewart and White Lakes only. Other easements were not visited frequently enough to give adequate data for NR forms.

W A T E R F O W L

REFUGE Lake Ilo

MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada						8	8	8		
Cackling										
Brant										
White-fronted						52				
Snow						27				
Blue										
Other										
Ducks:										
Mallard	2000	2000	2000	2000	2000	2000	2000	2000	10000	25000
Black										
Gadwall	200	200	200	200	600	800	600	200	100	
Baldpate	200	200	200	1000	1800	2000	2000	1000	1000	
Pintail	2000	2000	2000	2000	2000	2000	2000	2000	2000	1000
Green-winged teal	50	50	50	200	400	600	500	200	400	
Blue-winged teal	200	200	400	800	1200			100	100	
Cinnamon teal										
Shoveler	2000		400	400	800	800	800	500	200	
Redhead Redhead	10	10	10	10	20	50	100	200	200	50
Ring-necked										
Ring-necked										
Canvasback	10	10	10	10	50	50	100	200	200	
Scaup							100			500
Goldeneye						20	20	20		
Bufflehead						10	10	10		
Ruddy						400	400	100		
Other										
Coot:	2000	2000	1500	2000	2000	1000	500	500	100	

WATERFOWL
(Continuation Sheet)

REFUGE Lake Ilo MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen: total
	11	12	13	14	15	16	17	18		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	32	42							465	
Cackling										
Brant										
White-fronted	43	43							444	
Snow									189	
Blue										
Other										
Ducks:										
Mallard	30000	40000	20000	12000	4000	4000	2000	2000	1,302,000	
Black										
Gadwall									22,400	
Baldpate									70,000	
Pintail	1000	1000							147,000	
Green-winged teal									17,850	
Blue-winged teal									57,800	
Cinnamon teal										
Shoveler									71,400	
Wood										
Redhead	100								5,590	
Ring-necked				4					28	
Canvasback	100			2					6,594	
Scaup	500	500	500	50					15,750	
Goldeneye									420	
Bufflehead									210	
Ruddy									6,800	
Other										
Coot:									86,200	

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans				Principal feeding areas
Geese	1098	90		
Ducks	1703142	41500		Principal nesting areas
Coots	88200	3000		
				Reported by C. M. Dinkins

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1750
Form NR-1
(Rev. March 1953)

W A T E R F O W L

REFUGE Pretty Rock

MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard										10000
Black										
Gadwall										150
Baldpate										500
Pintail										2000
Green-winged teal										100
Blue-winged teal										500
Cinnamon teal										
Shoveler										100
Wood										
Redhead										100
Ring-necked										
Canvasback										100
Scaup										200
Goldeneye										
Bufflehead										
Ruddy										100
Other										
<u>Coot:</u>										300

Int. Dup. Sec.,
Wash.. D. C. 37944

WATERFOWL
 (Continuation Sheet)

REFUGE Pretty Rock MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total	
	11	12	13	14	15	16	17	18			
<u>Swans:</u>											
Whistling											
Trumpeter											
<u>Geese:</u>											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
<u>Ducks:</u>											
Mallard			20000						200,000		
Black											
Gadwall									10,000		
Baldpate									15,000		
Pintail									40,000		
Green-winged teal									7,000		
Blue-winged teal									20,000		
Cinnamon teal											
Shoveler									7,000		
Wood											
Redhead									7,000		
Ring-necked											
Canvasback									10,000		
Scaup									15,000		
Goldeneye											
Bufflehead											
Ruddy									6,000		
Other											
<u>Coot:</u>									20,000		

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas
Geese	:	:	:	
Ducks	757,000	:	:	Principal nesting areas
Coots	20,000	:	:	
Reported by				C.M. Dinkins

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

W A T E R F O W L

REFUGE Stewart Lake

MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted								1	1	
Snow					1					
Blue										
Other										
<u>Ducks:</u>										
Mallard					600			3000	4000	
Black										
Gadwall					100			200		
Baldpate					200			250		
Pintail					200			400		
Green-winged teal								100		
Blue-winged teal								100		
Cinnamon teal										
Shoveler					100			150		
Wood										
Redhead								50		
Ring-necked										
Canvasback								50		
Scaup					500			100		
Goldeneye										
Bufflehead										
Ruddy					75			100		
Other										
<u>Coot:</u>										
								200		

WATERFOWL
 (Continuation Sheet)

REFUGE Stewart Lake MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	11	12	13	14	15	16	17	18		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard							800		210,000	
Black										
Gadwall									12,000	
Baldpate									15,000	
Pintail									20,000	
Green-winged teal									5,000	
Blue-winged teal									12,000	
Cinnamon teal										
Shoveler									10,000	
Wood										
Redhead									5,000	
Ring-necked										
Canvasback									5,000	
Scaup									10,000	
Goldeneye										
Bufflehead										
Ruddy									6,000	
Other										
Coot:									14,000	

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas
Geese	:	:	:	
Ducks	308,000	:	:	Principal nesting areas
Coots	14,000	:	:	
Reported by				C. M. Dinkins

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

W A T E R F O W L

REFUGE White Lake

MONTHS OF September TO December, 1954

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted									65	
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard					1800			2500	5000	
Black										
Gadwall					60				100	
Baldpate					200				200	
Pintail					600				2000	
Green-winged teal									100	
Blue-winged teal					400				300	
Cinnamon teal										
Shoveler					60				200	
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup									500	
Goldeneye										
Bufflehead										
Ruddy					20					
Other										
<u>Coot:</u>										
					100				500	

WATERFOWL
(Continuation Sheet)

REFUGE		White Lake								MONTHS OF				September		TO		December		, 1954	
		(2)								(3)		(4)									
		Weeks of reporting period								Estimated		Production									
(1)										waterfowl		:Broods:Estimated									
Species		11	12	13	14	15	16	17	18	days use		: seen :		total							
Swans:																					
Whistling																					
Trumpeter																					
Geese:																					
Canada																					
Cackling																					
Brant																					
White-fronted		65												900							
Snow																					
Blue																					
Other																					
Ducks:																					
Mallard		15000						150						480,000							
Black																					
Gadwall														4,000							
Baldpate														7,000							
Pintail														45,000							
Green-winged teal														2,000							
Blue-winged teal														14,000							
Cinnamon teal																					
Shoveler														6,000							
Wood																					
Redhead																					
Ring-necked																					
Canvasback																					
Scaup														8,000							
Goldeneye																					
Bufflehead																					
Ruddy														2,000							
Other																					
Coot:														10,000							

(over)

11

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas
Geese	900	:	:	
Ducks	568,000	:	:	Principal nesting areas
Coots	10,000	:	:	
				Reported by

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Lake Ilo, ~~Harriet-Sumner~~ Months of September to December 1954

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Common Loon			2	9/15-30						
Eared Grebe			100	9/20-10/2						
Western Grebe		none								
White Pelican			50	9/20-30						
Double-crested Cormorant			20	9/10-20						
Great Blue Heron			15	9/10-30						
American Bittern			15	9/10-30						
Sandhill Crane			3000	10/10-30						
II. Shorebirds, Gulls and Terns:										
Common Snipe			20	10/1-15						
Western Willet			20	10/1-15						
Greater Yellow-legs			100	9/20-30						
Lesser Yellow-legs			50	9/20-30						
Dowitcher			50	9/20-30						
Marbled Godwit			10	9/10-20						
Avocet			5	9/10-20						
Wilson's Phalarope			200	9/10-30						

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove		50	9/1-20		
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle		5	12/10-30		
Duck hawk		9	11/20-30		
Horned owl		9	12/1-30		
Magpie	none observed				
Raven					
Crow	Common on ring migration but fewer than usual.				
Snowy Owl		10	12/1-30		
Swainson's Hawk		10-	9/10-30		
Rough-legged Hawk		12	9/10-30		
Marsh Hawk		10	9/10-30		
Sparrow Hawk		10	9/10-30		
Prairie Falcon		3	12/1-30		
			Reported by <u>G. M. Dickinson</u>		

INSTRUCTIONS

(See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

UPLAND GAME BIRDS

1613

Refuge Lake Ilo and Esmeralda

Months of September to December, 1944

(1) Species Common Name	(2) Density		(3) Young Produced		(4) Sex Ratio Percentage	(5) Removals			(6) Total Estimated number using Refuge	(7) Remarks Pertinent information not specifically requested. List introductions here.
	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total		Hunting	For Re- stocking	For Research		
<u>Lake Ilo</u>										
Ring-necked Pheasant									300	
Sharp-tailed Grouse									50	
European Partridge									40	
<u>Pretty Rock</u>										
Ring-necked Pheasant									300	
Sharp-tailed Grouse									10	
European Partridge									20	
<u>Stewart Lake</u>										
Ring-necked Pheasant									100	
Sharp-tailed Grouse									40	
European Partridge									20	
<u>White Lake</u>										
Ring-necked Pheasant									20	
Sharp-tailed Grouse									15	
European Partridge									30	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

DISEASE

Refuge Lake Ilo Year 19. 54

Botulism

Lead Poisoning or other Disease

* Period of outbreak NONE

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease NONE

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____

3-1756
Form NR-6
(April 1946)

FISH

Refuge Lake Isle Year 19454

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Large-mouthed Bass	Few		200					
Blue Gills	None							
Crapplies	none							
Yellow Perch	Heavy	3000	50000					
Northern Pike	Heavy	800	2000					
Walleyed Pike	Few	200	200					
Bullheads	Moderate	800	2000					
Common Suckers	Heavy							
Golden Shiner	Heavy							

REMARKS:

(April 1946)

FISH

Refuge Stewart Lake Easement Year 1945

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Yellow Perch	Heavy	300	2000					
Bullheads	Few	300	200					
Northern Pike	Few	not open						
Common Suckers	Few							

REMARKS:

3-1757
Form NR-7
(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Lake Ilo Year 1945

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Crested Wheat Grass & Sweet Clover	S. 34	20#/ac	5 ac	100 # seed	5/14	50%		
"	S. 29	"	8	160	5/16	50		
Colorado Green & Black Hills Spruce	H dq.			26 plants	6/10	100		Damaged by hail but made good recovery
Miscellaneous Trees & Shrubs	Hdq.	replacement		950 plants	6/29			
Willow	Lakeshore	30/rod	80 rods	3000 cuttings	5/23-24	10	unknown	

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....
Hedgerows, cover patches.....
Food strips, food patches.....
Forest plantings.....

CULTIVATED CROPS

Refuge Lake Ilo Year 1954

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Tom Donohoe	82	A-1,2	Wheat	15	7	105					8 ac. Summer Fallow
			Corn	15					7	105	8 ac. seeded to grass
			Oats	20	6	120					
Charles Schollmeyer	81	A-4,5	Wheat	15	22½	338					Most damaged
			Barley	20	4½	90	7	140			Dry weather cut yield
			Flax	12	12	144					
			Corn	30					7	210	

Summary of Crops Grown:	Crop	Acreage	Permittee's Share		Government's Share		Total Revenue	
			Acres	Bushels	Harvested Acres	Bu.	Unharvested Acres	Bu.
	Wheat	29½	29½	443				
	Barley	11½	4½	90	7	140		
	Flax	12	12	144				
	Corn	4					14	315
	Oats	6	6	120				

Interior Duplicating
Section, Wash. D. C.

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

REFUGE GRAIN REPORT

Refuge Lake IloMonths of September through December, 1954

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat	95	none	95					95			95
Barley	190	140	330	230				100			100
Totals	285	140	425	230				195			195

(8) Indicate shipping or collection points _____

(9) Grain is stored at Lake Ilo headquarters and Tom Donohoe farm on refuge(10) Remarks 230 bushels transferred to Des lacs 10/12/54

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

1620

Refuge Lake Isle Year 1946

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
Yellow Sweet Clover					200 lbs	Nad Lake Ref.	200	0
Alfalfa					400 lbs	Commodity Credit Corporation	400	0
Misc. trees & shrubs					950	SCS		
26 Colo. & Black Hills Spruce					26	Commercial Nursery		

HAYING AND GRAZING

Refuge Lake Umbagog Year 1954

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
<u>Haying</u>									
Tom Denchhoe	179-DL(IX)	H-1,2,3	100		30	7/15-11/15/54	1.50	57.00	
C. Schollmeyer	180-DL(IX)	H-4	10		4	7/15-11/15/54	1.50	6.00	
<u>Grazing</u>									
Wm. Seston	179-DL(LI)	G-8	45	20		8/1-9/30/54	1.00	20.00	

Totals:

Acreage grazed.....	<u>45</u>	Animal use months.....	<u>20</u>	Total income Grazing.....	<u>20.00</u>
Acreage cut for hay.....	<u>110</u>	Tons of hay cut.....	<u>42</u>	Total income Haying.....	<u>63.00</u>

DISTRICT 4-A EASEMENT REFUGES

CLEARWATER LAKE NATIONAL WILDLIFE REFUGE

I. General.

Waterlevels in the small lake are about the same as last year. A fair stand of bulrush can be found along the north end and the SE corner.

A complaint was received from the permittee trapper that his line was being trespassed by a young neighbor boy. A trip was made to the area and the situation remedied, at least temporarily.

II. Wildlife.

Practically the only utilization by waterfowl on the area this fall was a period of some three weeks in October when 1,000 to 2,000 Mallards used the lake as a resting area. Hunting is permitted quite close to the waters edge and is therefore not very attractive. A visit to the area on September 27 revealed a total of exactly one Mallard, one Common Loon and 10 Pied-billed Grebes on the lake.

III. Physical Development.

Boundary posting was checked September 27; one post and two signs were replaced.

SHELL LAKE NATIONAL WILDLIFE REFUGE

I. General.

Waterlevels remained about the same as a year ago. The north end of the lake contains the only sizeable growth of emergent vegetation. A fair supply of pond weed was evident.

II. Wildlife.

The area was visited on September 27; the following observations of wildlife were recorded:

Canada Geese	- 6
Mallard	- 450
Gadwall	- 150
Widgeon	- 600
Pintail	- 150
Green-winged Teal	- 150
Blue-winged Teal	- 150
Shoveler	- 60
Redhead	- 60
Canvas-back	- 750
Scaup	- 240

SHELL LAKE NATIONAL WILDLIFE REFUGEII. Wildlife - con't

Ruddy	- 240
Coot	- 2500
Amer. Merg.	- 2
Sandhill Cranes	- 4
Crows	- 15000

III. Physical Development.

Two signs were replaced and numerous others set up again on the visit to the area September 27.

LAKE ZAHL NATIONAL WILDLIFE REFUGEI. General.

Area not visited this period.

II. Wildlife.

From the one report received on the area it is believed that it experienced much the same situation as did the Lostwood Refuge - a high summer population of waterfowl and a low fall population. Trapping permits were issued to three permittees at Zahl.

III. Physical Development.

Funds have been made available for repair to the dam at the south end of the lake. This work is to be done this next spring. Some additional fencing will also be done next period.

WATERFOWL

REFUGE Lostwood

MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period									
	: Sept. 4 : 1	: Sept. 11 : 2	: Sept. 18 : 3	: Sept. 25 : 4	: Oct. 2 : 5	: Oct. 9 : 6	: Oct. 16 : 7	: Oct. 23 : 8	: Oct. 30 : 9	: Nov. 6 : 10
Swans:										
Whistling					5	35	45	59	59	59
Trumpeter										
Geese:										
Canada						15	15	15	14	12
Cackling										
Brant										
White-fronted						45	45			
Snow						2	1	1	1	1
Blue										
Other										
Ducks:										
Mallard	5600	5000	5000	5000	2500	2500	3500	4000	5000	5000
Black	10	10	10	10	10					
Gadwall	1900	1800	1700	1800	1900	1400	800	500	300	50
Baldpate	1100	1000	1000	1300	2000	1800	1500	1000	500	70
Pintail	1200	1100	1000	1000	1000	1000	1000	800	400	100
Green-winged teal	200	200	500	1000	1200	1200	500	100	50	20
Blue-winged teal	4500	4000	3000	1500	500	300	100	50		
Cinnamon teal										
Shoveler	450	400	400	700	1000	1200	1200	1000	700	100
Wood										
Redhead	700	500	300	200	300	200	100	100	50	20
Ring-necked	20	20	20	20	50	100	50	50		
Canvasback	1200	1000	800	600	700	700	300	200	50	
Scaup	1400	1200	1000	800	1000	1200	1200	1000	800	200
Goldeneye										15
Bufflehead	10	10	20	20	50	100	150	150	80	50
Ruddy	2500	2500	2000	1600	1500	1000	800	300	50	10
Other										
Coot:	8000	7000	6000	3000	2000	1000	500	100		

WATERFOWL
(Continuation Sheet)

REFUGE Lostwood

MONTHS OF September TO December, 19 54

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total	
	Nov. 13	Nov. 20	Nov. 27								
Swans:											
Whistling									1,830		
Trumpeter											
Geese:											
Canada									420		
Cackling											
Brant											
White-fronted									450		
Snow									40		
Blue											
Other											
Ducks:											
Mallard	500	500	500						312,200		
Black									350		
Gadwall									88,080		
Baldpate									78,890		
Pintail	20	20	20						60,620		
Green-winged teal	10								34,860		
Blue-winged teal									97,650		
Cinnamon teal											
Shoveler									43,750		
Wood											
Redhead									17,290		
Ring-necked									2,310		
Canvasback									38,850		
Scaup	200	50	50						70,700		
Goldeneye	10	10	10						300		
Bufflehead	20	20	20						4,900		
Ruddy	10	10	10						86,030		
Other											
Coot:									193,200		

(over)

	(5)	(6)	(7)
	<u>Total Days Use</u>	<u>Peak Number</u>	<u>Total Production</u>
Swans	<u>1,830</u>	<u>59</u>	<u> </u>
Geese	<u>910</u>	<u>62</u>	<u> </u>
Ducks	<u>933,750</u>	<u>20,790</u>	<u> </u>
Coots	<u>193,200</u>	<u>8,000</u>	<u> </u>

SUMMARY

Principal feeding areas Thompson Lake had largest concentra-
tion; a scattering of ducks could be found in all sloughs;
Ag. Units A-33, A-48, A-65, A-66 & A-72 were utilized

Principal nesting areas

Reported by **Kermit Dybbetter**

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751

Form NR-1A

(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)Refuge.....Lostwood.....Months of.....September.....to December.....1954

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Horned Grebe										100
Hared Grebe										500
Pied-billed Grebe										100
White Pelican					200	Sept. 6	Only observation			200
Great Blue Heron										5
B.-c. Night Heron										15
American Bittern										5
Sandhill Crane	6	Sept. 19	1,670	Oct. 12	1	Oct. 14	(Migration thru area)			6,000
II. <u>Shorebirds, Gulls and Terns:</u>										
Ring-billed Gull					1	Nov. 29				25
Killdeer										10

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove					80
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	1	Oct. 20	2 or 3 still present		8
Duck hawk					10
Horned owl					25
Magpie					10,000
Raven					4
Crow					100
Bald Eagle	1	Oct. 6	1	Nov. 5	150
Marsh Hawk					75
Amer. Rough-legged Hawk			A few remain		50
Red-tailed Hawk					1
Swainson's Hawk					2
Pidgeon Hawk	1	Sept. 27			2
Short-eared Owl					2
Great Shrike					2
Reported by Kermic Dybsetter					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

UPLAND GAME BIRDS

1613

Refuge Leathwood

Months of September to December, 1954

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Prairie Chicken	None observed on refuge since April of 1952.					
Sharp-tailed Grouse					1400	
European Partridge					150	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

BIG GAME

Refuge Letchford

Calendar Year 1954

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
Common Name	Cover types, total Acreage of Habitat	Number												
White-tailed Deer		40	35									160	100	
Mule Deer													8	

Remarks:

Reported by _____

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

DISEASE

Refuge LostwoodYear 19 54

Botulism

Lead Poisoning or other Disease

Period of outbreak None

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

(a) Waterfowl
(b) Shorebirds
(c) Other

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____

3-1756
Form NR-6
(April 1946)

FISH

Refuge.....Lostwood.....

Year 1946

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number re- moved for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
None								

REMARKS:

3-1757
Form NR-7
(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Lostwood Year 1945

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Corn (Kingscott)	A-65	11 lbs/acre	5 acres	1 bu.	6/2	80%	Insufficient cool weather prevented the maturing of all the corn.	moisture and prevented of all the
Corn (Falconer)	A-65	11 lbs/acre	5 acres	1 bu.	6/2	80%		
Norghum Sorghum	A-65	15 lbs/acre	5 acres	75 lbs.	6/3	1%	drough	plowed under
Sooner Milo	A-65	15 lbs/acre	5 acres	75 lbs.	6/3	1%	drouth	plowed under

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....
Hedgerows, cover patches.....
Food strips, food patches 20.....
Forest plantings.....

CULTIVATED CROPS

Refuge Lostwood Year 1954

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Anderson, Adolph	20040	A-91	S.F.								15 acres S.F.
		A-92	N.F.								15 acres not farmed
		A-92	Wheat	3	18	48	4	12			
		A-93	S.F.								15 acres S. F.
		A-93	Wheat	3.5	12	42	3	10			
		A-94	S.F.								10 acres S.F.
		A-94	Wheat	4.5	24	108	6	27			
		A-95	Flax	1.2	10	12					Seeded to grass
		A-97	Flax	4	10	40					
Edwards, Alford	21041	A-98	S.F.								15 acres S.F.
		A-98	Flax	1.5	25	38					Seeded to grass
		A-99	S.F.								10 acres S.F.
		A-99	Flax	1	50	50					Seeded to grass
		A-80	Wheat	4.5	26	117	14	63			
		A-81	Oats	6	30	180					Wheat in lieu of oats

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Crops Report Form NR-8 should be prepared on a calendar-year basis for crops harvested or utilized during the calendar year and sub-December 31 refuge report.

- List each permittee separately. If lands of the refuge are operated by refuge personnel or hired labor, this should be indicated in the Per-

- List the number of the Special Use Permit issued to the in-

ation - The Unit No. or name specified in the Economic Use Plan should be shown in this column.

n - A separate line of the form should be used for each crop operated by a permittee or by refuge personnel. This is important, since if the report is made by each operator is not specifically enumerated, the report will be of little value for statistical purposes.

Yield per Acre - It is important that the average yield per acre owned by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all yields be reduced to bushels wherever possible, or, as in the case of seedling of seed such as that of sweet clover, alfalfa, bromegrass, the harvested crop in pounds may be shown. Timothy, alfalfa, or other crops harvested by the permittee should be shown on Form NR-10 and should be shown in the Permittee's Share column.

Permittee's Share or Return - Harvested - Show the number of bushels harvested by the permittee and the acreage from which this share is harvested, whether raised by refuge personnel and by permittees. Unharvested - show the number of acres of crops allowed to remain unharvested as food and wildlife. An estimate of the number of bushels of grain that is available in such unharvested crops should be shown in the Bushels

Other Services, or Cash Revenue - Show other services received by the permittee in cooperative farming activities, the number of acres of food for wildlife, the amount of wildlife crops not otherwise re-planted by cooperators for the Service, or the cultivation of other crops. If the permit is on a fee basis, the total cash revenue should be shown under the Service.

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(44-1117-104)
FORM NR-8
3-7-59

CULTIVATED CROPS

Refuge Lostwood Year 1954

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Edwards, Sanford	21042	A-70	Flax	2.6	45	117					
		A-71	Barley	11	12	132	3	33			
			Barley	4	15	60					Seeded to grass
		A-72	Barley	11	13	198	17	187			Barley in lieu of flax
		A-73	Flax	2.6	20	52					35 acres S.F. Seeded to grass, no flax crop
			S.F. Flax		20						30 acres S.F. Seeded to grass, no crop
		A-74									30 acres S.F.
		A-75	S.F. Oats		30						20 acres S.F. Seeded to grass
		A-76	S.F.								
		A-77	Wheat	3	49	147	16	48			
			S.F.								
		A-78	Oats	2.3	20	50					

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Crops Report Form NR-8 should be prepared on a calendar-year basis for crops harvested or utilized during the calendar year and sub-December 31 refuge report.

- List each permittee separately. If lands of the refuge are worked by refuge personnel or hired labor, this should be indicated in the Permittee's Share column.

- List the number of the Special Use Permit issued to the individual.

Unit - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Operator - A separate line of the form should be used for each crop permittee or by refuge personnel. This is important, since if the report is made by each operator is not specifically enumerated, the report will not be valid for statistical purposes.

Yield per Acre - It is important that the average yield per acre be shown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all bushels be reduced to bushels wherever possible, or, as in the case of seed such as that of sweet clover, alfalfa, bromegrass, etc., the harvested crop in pounds may be shown. Timothy, alfalfa, or other crops harvested by the permittee should be shown on Form NR-10 and should be listed under the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested by the Government and the acreage from which this share is harvested, whether raised by refuge personnel and by permittees. Unharvested - show the number of acres of crops allowed to remain unharvested as food and for wildlife. An estimate of the number of bushels of grain that is available for wildlife in such unharvested crops should be shown in the Bushels column.

Other Services, or Cash Revenue - Show other services received by the permittee in cooperative farming activities, the number of acres of food crops for wildlife, the amount of wildlife crops not otherwise re-planted by cooperators for the Service, or the cultivation of other crops. If the permit is on a fee basis, the total cash revenue should be shown under the Service column.

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82V1-3
B-NH 11-19-64
(over 11-19-64)

CULTIVATED CROPS

Refuge Lashwood Year 195 4

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Erinkson, Martin	21044	A-9	Wheat	5	15	75					Barley in lieu of wheat
			S.F.								10 acres S.F.
		A-10	Wheat	5	28	140	7	35			Seeded to Alfalfa
			Oats	10	40	400					25 acres S.F.
			S.F.								Barley in lieu of flax
		A-25	Flax	3.2	15	48					15 acres S.F.
		A-27	Barley	6			10	60			Barley in lieu of flax
			Flax	3.2	10	32					
Lindberg, Albert	21045	A-45	Wheat	6	80	480					Re-seeded to grass
		A-48	Wheat	2.8	55	155					Duck depredations

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

1 Crops Report Form NR-8 should be prepared on a calendar-year basis for crops harvested or utilized during the calendar year and submitted by December 31 refuge report.

- List each permittee separately. If lands of the refuge are managed by refuge personnel or hired labor, this should be indicated in the Per-

- List the number of the Special Use Permit issued to the in-

ation - The Unit No. or name specified in the Economic Use Plan should be shown in this column.

m - A separate line of the form should be used for each crop permittee or by refuge personnel. This is important, since if a crop is not specifically enumerated, the report value for statistical purposes.

ield per Acre - It is important that the average yield per acre grown by each operator should be shown.

's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all yields be reduced to bushels wherever possible, or, as in the case of seed such as that of sweet clover, alfalfa, bromegrass, etc., the harvested crop in pounds may be shown. Timothy, alfalfa, or other crops harvested by the permittee should be shown on Form NR-10 and should not be shown on the Permittee's Share column.

's Share or Return - Harvested - Show the number of bushels harvested by the permittee and the acreage from which this share is harvested, whether raised by refuge personnel and by permittees. Unharvested - show number of acres of crops allowed to remain unharvested as food and wildlife. An estimate of the number of bushels of grain that is available for wildlife in such unharvested crops should be shown in the Bushels

ry Services, or Cash Revenue - Show other services received by the permittee in cooperative farming activities, the number of acres of food crops for wildlife, the amount of wildlife crops not otherwise reported, crops planted by cooperators for the Service, or the cultivation of other operations. If the permit is on a fee basis, the total cash revenue should be shown under Service.

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(44) 1000
FORM NR-8
3-1-28

CULTIVATED CROPS

Refuge Baraboo Year 195 4

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				
					Acres	Bu. Har- vested	Harvested		Unharvested		Compensatory Services, or Cash Revenue
							Acres	Bu.	Acres	Bu.	
Lindberg, Duane	21046	A-54	N.F.							25 acres not farmed	
		A-55	S.F.							60 acres S.F.	
		A-56	Barley Oats	18.5 20	13 40	240 800	13	240			Barley in lieu of oats
Lindberg, Harry & Art	21082	A-44	Flax	2.5	90	225					Seeded to grass
		A-47	Wheat S.F.	6	20	120	5	30			40 acres S.F.
		A-50	S.F.								85 acres S.F.
		A-51 W	Wheat	7.5	76	555	19	138			
Lindberg, Marvin	21047	A-40	Barley S.F.	11	28	308	7	77			25 acres S.F.
		A-41	Barley	11	27	297	28	308			Barley in lieu of
		A-52	Wheat	9.6	55	528					" " " Wheat
		A-53	Wheat S.F.	9.6	30	288					85 acres S.F.

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

1 Crops Report Form NR-8 should be prepared on a calendar-year basis for crops harvested or utilized during the calendar year and submitted by December 31 refuge report.

- List each permittee separately. If lands of the refuge are worked by refuge personnel or hired labor, this should be indicated in the Permittee column.

- List the number of the Special Use Permit issued to the individual.

Unit - The Unit No. or name specified in the Economic Use Plan should be shown in this column.

Operator - A separate line of the form should be used for each crop operator, whether by permittee or by refuge personnel. This is important, since if the operator is not specifically enumerated, the report will not be valid for statistical purposes.

Yield per Acre - It is important that the average yield per acre be shown by each operator.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all yields be reduced to bushels wherever possible, or, as in the case of seed such as that of sweet clover, alfalfa, bromegrass, etc., the harvested crop in pounds may be shown. Timothy, alfalfa, or other crops harvested by the permittee should be shown on Form NR-10 and should be reported in the Permittee's Share column.

Refuge's Share or Return - Harvested - Show the number of bushels harvested by the Government and the acreage from which this share is harvested, whether raised by refuge personnel and by permittees. Unharvested - show the number of acres of crops allowed to remain unharvested as food and for wildlife. An estimate of the number of bushels of grain that is available for wildlife in such unharvested crops should be shown in the Bushels column.

Other Services, or Cash Revenue - Show other services received by the permittee in cooperative farming activities, the number of acres of food and forage for wildlife, the amount of wildlife crops not otherwise re-planted by cooperators for the Service, or the cultivation of other crops. If the permit is on a fee basis, the total cash revenue should be shown in the Service column.

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CULTIVATED CROPS

Refuge Lostwood Year 1954

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				
					Acres	Bu. Har- vested	Harvested		Unharvested		Compensatory Services, or Cash Revenue
							Acres	Bu.	Acres	Bu.	
Lindberg, Walter	21051	HU-25	Flax	3.4	25	85					Seeded to Alfalfa & Brome grass
Lucy, Wm. J.	21048	A-33	Barley	8.5	70	595					Seeded to grass
Nelson, John M.	21049	A-60	Flax	2.5	26	65					Seeded to grass
			Oats	5	6	30					" " "
			S.F.								45 Acres S.F.
		A-61	Flax	3.2	10	32					Seeded to grass
		A-62	S.F.								15 acres S.F.
		A-63	Wheat	5	60	300	20	100			Seeded to grass
			Flax	3.2	20	64					Hail damage & Duck
		A-64	Barley	2.6	25	65					Depredation
		A-90	Wheat	5	8	40	2	10			Wheat in lieu of
			Oats	10	20	200					oats
		S.F.								55 acres S. F.	
	A-96	Wheat	5	15	80	4	20			30 acres S.F.	
			S.F.								

This image contains all information on the document.

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

1 Crops Report Form NR-8 should be prepared on a calendar-year basis for crops harvested or utilized during the calendar year and submitted by December 31 refuge report.

- List each permittee separately. If lands of the refuge are operated by refuge personnel or hired labor, this should be indicated in the Permittee column.

- List the number of the Special Use Permit issued to the individual.

Economic Use Plan - The Unit No. or name specified in the Economic Use Plan should be entered in this column.

Operator - A separate line of the form should be used for each crop harvested by a permittee or by refuge personnel. This is important, since if a crop is harvested by each operator is not specifically enumerated, the report value for statistical purposes.

Yield per Acre - It is important that the average yield per acre harvested by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all yields be reduced to bushels wherever possible, or, as in the case of seed such as that of sweet clover, alfalfa, bromegrass, etc., the harvested crop in pounds may be shown. Timothy, alfalfa, or other crops harvested by the permittee should be shown on Form NR-10 and should be entered in the Permittee's Share column.

Permittee's Share or Return - Harvested - Show the number of bushels harvested by the Government and the acreage from which this share is harvested, whether raised by refuge personnel and by permittees. Unharvested - show number of acres of crops allowed to remain unharvested as food and wildlife. An estimate of the number of bushels of grain that is available for wildlife in such unharvested crops should be shown in the Bushels column.

Other Services, or Cash Revenue - Show other services received by permittees in cooperative farming activities, the number of acres of food and wildlife, the amount of wildlife crops not otherwise reported, crops planted by cooperators for the Service, or the cultivation of other lands. If the permit is on a fee basis, the total cash revenue should be shown in the Service column.

CULTIVATED CROPS

Refuge Idaho Year 195 4

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Nickol, Raymond	21050	A-82	S.F.	—							45 acres S. F.
		A-83	Barley	28.6	20.8	595	5.2	148			10 acres S.F.
		A-84	S.F.	7.1	44	312	11	78			
			Barley	28.6	15.2	434	3.8	109			53 acres S.F.
Vaage, Donald	21043	A-65	Wheat	7.5	16.4	123	7.6	57			Wheat in lieu of barley
			Barley	20.5	14	286					Farmed by Refuge personnel
		A-66	Corn						10		37 acres S.F.
			S.F.								
			Wheat	6.5	15.6	121	9.4	61			Wheat in lieu of flax
			Barley	17.5	4	70	1	18			
	Flax	4	19	76							

Summary of Crops Grown:		Crop	Acreage	Permittee's Share		Government's Share		Total Revenue
	Bu./acre			Acres	Bushels	Harvested	Unharvested	
						Acres	Bu.	
							Acres	Bu.
Wheat	5.8		777	649	5779	128	589	
Barley	15.1		240	282	3256	88	1180	
Flax	2.4		285	395	936			
Oats	8.1		208	208	1660			
		Wheat						
		Barley						
		Flax						
		Oats						
		S.F.						

Interior Duplicating
Section, Wash.D.C.

2593

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

82-1-3728
FORM NR-8
(April 1964)

REFUGE GRAIN REPORT

Refuge LostwoodMonths of May through December, 1954

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat	100	689	789	315		10	325	474		474	
Barley	1	1180	1181	1075		6	1081	100		100	
Oats		175	175			5	5	170		170	
Corn		100	100			15	15	85		85	

(8) Indicate shipping or collection points _____

(9) Grain is stored at Refuge headquarters(10) Remarks Corn received from Squaw Creek Refuge - feed for captive goose flock

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3-1759
Form NR-9
(April 1946)

COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

Refuge Lostwood Year 1946

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus Ant. Seeded
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
Bromo grass							9,900#	1,340
Crested Wheat grass					900# 1500# 2360#	Purchase Des Lacs Mud. Lake	3,560#	1,200
Slender Wheat grass					500#	Purchase	300#	700
Sweet Clover					1070#	Mud Lake	1,210#	960
Alfalfa					300# 2025#	Purchase Comm. Cr. Corp.	2,205#	220

~~HAYING~~ AND GRAZING

Refuge Lostwood Year 19 54

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Anderson, John	22288	G-6B	1120	165.00		10/1 - 11/15	1.00	165.00	
Anderson, John W.	22287	G-4B	916	310.64		7/8 - 10/19	1.00	310.64	
Anderson, Marvin	21058	G-6A	2330	488.55		7/24 - 11/15	1.00	488.55	
Ekberg, Gustave	22291	G-4D	99	24.68		7/3 - 9/15	1.00	24.68	
Gissel, Harold	22282	G-4C	1208	158.61		7/1 - 11/2	1.00	158.61	
Lucy, Ben	21056	G-2	1551	453.44		7/24 - 11/10	1.00	453.44	
Lucy, Tim	21057	G-1	583	260.00		7/1 - 11/15	1.00	260.00	
Olson, Edna	22283	G-4C	1208	147.60		7/5 - 11/15	1.00	147.60	
Tinjum, Clarence	21059	G-8	1514	603.00		7/1 - 11/15	1.00	603.00	

Totals:

Acreage grazed 9,421 Animal use months 2,611.52 Total income Grazing \$2,611.52
Acreage cut for hay _____ Tons of hay cut _____ Total income Haying _____

HAYING AND ~~GRAZING~~

Refuge Lostwood Year 1945

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Anderson, John	22289	35,74	120		90	7/16 - 11/15	1.50	135.00	
Anderson, Marvin	22294	23,45,46	175		125	" "	1.50	187.50	
Bakken, Osear	22281	18			none	" "	1.50	15.00	Down payment forfeited
Edwards, Alford	22292	17,70	80		60	" "	1.50	90.00	
Edwards, Milford	22297	21,22	30		21.85	" "	1.50	32.77	
Engel, Obert	22285	19,20	45		32	" "	1.50	48.00	
Eriksen, Martin	22290	4,5,6,9, 10,11	95		70	" "	1.50	105.00	
Lindberg, Art	22293	30,40	80		60	" "	1.50	90.00	
Lindberg, Duane	21055	55,56	3		2	" "	1.50	15.00	Dwn. paymt. in excess of value of hay removed; bal. forfeited
Lindberg, Marvin	22299	NE 1/4 Sec. 4-159-91	50		37.5	" "	1.50	56.25	
	22298	A-40	12		17	" "	3.00	51.00	Area to be in Cultivation Alfalfa
Lindberg, Walter	21053	25,26,27	50		35.5	" "	1.50	53.25	
Lucy, Ben	22286	15	30		22.5	" "	1.50	33.75	
Lucy, Wm. J.	22296	18	45		34.5	" "	1.50	51.75	
Nickol, Raymond	22284	72,73	35		26.3	" "	1.50	39.45	
Tinjum, Ervin	21060	50,51			none	" "	1.50	15.00	Down payment forfeited

Totals:

Acreage grazed..... Animal use months..... Total income Grazing.....
Acreage cut for hay 850..... Tons of hay cut 634.15..... Total income Haying \$1,018.72

Refuge LostwoodYear 1954

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B.F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
None								

Total acreage cut over _____

Total income _____

No. of units removed B. F. _____

Method of slash disposal _____

Cords _____

Ties _____

LAKE ILO REFUGE.I. GENERALA. Weather Conditions.

Total precipitation for the period at Lake Ilo was below normal.

The winter as a whole was very mild. April was cold, in fact, it was colder than February; the month of February was the warmest ever on record. Very little snow stayed on the ground at any time during the winter. Farming has been slow and the spring is late.

Weather data for the period were as follows:

<u>Month</u>	<u>Precipitation</u>	<u>Snowfall</u>	<u>Max.Temp.</u>	<u>Min.Temp.</u>
January	.88	13.0	48	-37
February	.47	3.0	57	- 3
March	.86	7.0	52	-14
April	.77	3.0	63	- 8
Total	2.98	26.0 Extreme	63 Extreme	-37

B. Water Conditions.

The ice level was 11 inches below spillway crest on January 1 and remained at that level until February 4; this date it raised to four inches below spillway crest. Water started flowing over the spillway on February 5 and has been flowing over for the remainder of the period. The ice was 11 inches thick on January 1 and 24 inches the latter part of January. By mid-February the ice was only eight inches thick and remained at about that thickness until the spring run-off which was the first week in April. All of the ice went off the lake on April 17.

The following table shows the water level in relation to spillway crest on various dates.

January 1	-	11 inches below spillway crest.
February 6	-	4 inches above spillway crest.
February 9	-	5 " " " "
February 13	-	2 " " " "
February 27	-	Small stream flowing over spillway.
March 1	-	" " " "
March 10	-	" " " "
March 31	-	" " " "
April 5	-	.8 feet above spillway crest.
April 6	-	2.0 feet above spillway crest.
April 7	-	1.5 " " " "
April 9	-	.5 " " " "
April 12-17	-	2 inches above spillway crest.
April 18-31	-	Small stream flowing over spillway.

This is the earliest and longest that water ever flowed over the spillway (Feb. 6 to April 30).

The water is in very good condition; it was tested by the State Game and Fish Department during January and the oxygen content was high for that time of the year. It was tested after the February run-off and found to be still very good; no fish were lost this winter.

C. Fires. None.

II. WILDLIFE

A. Migratory Birds.

At the start of the period 500 Mallards were present but by January 3 their numbers dropped to 160. They were not seen at all during the period January 24-February 6; on February 7 60 returned and remained until spring migrants arrived.

Mallards and Pintails arrived during the week of March 21-27, Green-winged Teal and Common Mergansers the following week. By April 15 all other species had arrived. Peak numbers of 9110 occurred during the final week of the period; this was far below last year's peak of 22530.

Only two species, Blue-winged Teal and Shovelers, were present in greater numbers than a year ago.

Total waterfowl use-days was also far below that for 1953 - 220,080 compared with 490,470. The biggest decrease in use was by Mallards and Lesser Scaup; Mallards were present in only one-third the numbers of last year and Scaup one-half.

A few geese used the area from April 4 to 24; 62 Canadas, 180 White-fronts and 430 Snows and Blues. Goose utilization too was below that of a year ago.

150 White Pelicans were present from April 11 to 15 and 10 Double-crested Cormorants from April 23 to 30.

The shore bird migration started the last week in April (except for a few Killdeer that appeared in March and April). Although the weather was very cold from April 25 to 30, more shore birds were observed on Lake Ilo than usual.

B. Upland Game Birds.

It is estimated that 250 Ring-necked Pheasants used the refuge during the period; it is believed there was no winter loss in Western North Dakota at all this winter. The Pheasants are very noticeable in the vicinity of the refuge this spring; more have been observed on and near the refuge than at any other place in Western North Dakota.

A few Sharp-tailed Grouse have been observed this period, but their population is lower than usual.

Four pair of European Partridge have been observed this spring; very few Huns are present in this vicinity compared to the past.

C. Big Game Animals.

None have been observed on the refuge during the period.

D. Fur Animals, Predators, Rodents, and other Mammals.

One permit was issued to trap fur-bearing animals on the refuge; only four Mink were trapped and shared on a 50-50 basis. No Muskrats were trapped due to water conditions; the population is not too high, so the lack of trapping will be no detriment.

It is estimated that two to four Beavers are using the refuge this spring. One Beaver has been destroyed and further control will be necessary as they are doing much damage to trees in the recreational area. It was intended that the permittee would trap these Beaver this spring but he was sick and in the hospital.

No Weasels have been observed on the refuge this period.

Two Skunks have been seen this spring; one of them was shot.

No Coyotes have been seen for several years. Several Fox have been seen on the refuge and it is believed their number is larger than ever in the past.

E. Predacious Birds, including Crows, Ravens, Magpies.

A number of Golden Eagles have been seen this period but their numbers are smaller than usual. One Bald Eagle was observed in March. A few Prairie Falcon were seen on the refuge during the period. A number of Marsh Hawks, Sparrow Hawks, American Rough-legged Hawks have also been seen.

Fewer Crows used the area this spring than usual. A few have been present during April.

Three Snowy Owls were seen during the period and two Horned Owls used the area most of the winter.

F. Fish.

Winter fishing was permitted on the refuge from December 16, 1953 to March 15, 1954.

It was estimated that 2000 man-days of fishing were expended and 40,000 Perch taken during the winter season. A large number of Northern Pike were also caught; most (?) of them were put back as there was no season on them. The Northerns that were caught measured from 24 to 30 inches in length.

On April 12 the control structure on a small private slough ("Penock's Slough") adjacent to Lake Ilo washed out. Northerns, which were "running" at the time, moved into the slough and were trapped when the dam was repaired. The local State Warden, Mr. Borden, and several local people picked up 700 of the fish and returned them to the lake on the 13th. On the 14th Mr. Borden requested further assistance to complete the task but by then all the fish were gone - either they had been "disposed of" the night before or there were not as many as first estimated. Those that were rescued weighed from five to six pounds.

A large number of Northerns are also below the spillway now, having gone over during the run-off; these will be returned to the lake if possible.

The summer fishing season, open for all species this year, will begin May 16.

III. REFUGE DEVELOPMENT - MAINTENANCE

A. Physical Developments.

The following maintenance and construction projects were accomplished during the period;

1. Purchased and installed stove for office.
2. Completed two-room addition to residence started last period.
3. Hauled coal from local mine for use in garages, shop and office.
4. Painted addition to residence - exterior and interior.
5. Made two trips to Des Lacs to procure supplies and get dump truck for rock hauling.
6. Located rock piles and contacted farmers in regards to securing rock for the refuge; hauled 12 cu. yds. of rock and placed on lakeshore near headquarters.
7. Mounted snow plow on truck and plowed snow off of refuge roads.
8. Made minor repairs to Diamond T truck, IHC pickup and F-30 tractor.
9. Hauled ashes and rubbish away from headquarters.
10. Cultivated trees on refuge with spring tooth harrow.
11. Worked ground with tandem disc and seeded 13 acres of grass and clover.
12. Spread fertilizer on 13 acres of grass and corn ground.
13. Cut and planted 3000 willow cuttings on shore line to stop erosion.
14. Hauled and placed 70 cu. yds. of rock along north rubble-masonry wall below Lake Ilo spillway.
15. Checked dam and spillway periodically during period.
16. Observed birds; checked fishermen and observed their catches during the winter season.

B. Plantings.

Planted 13 acres of grass and clover; five acres in SW $\frac{1}{2}$ Section 34 and eight acres in NW $\frac{1}{2}$ Section 24.

Permit No. 81 - Charles Schollmeyer (55 acres).

Half of the land will be planted to barley and wheat and the other half to corn. Half of this land has been summer fallowed in the past. All of the crop land will be fertilized. Wheat has been seeded to date, 12 acres of crop land have been seeded to grass (7 acres last year and 5 acres this year).

Permit No. 82 - Tom Donohoe.

45 acres were in farm land; 10 acres were seeded back to grass last year and seven acres this year. There are now 28 acres in farm land. Of the 28 seven acres will be planted to corn and seven to wheat; the other 14 acres will be summer fallowed.

IV. ECONOMIC USES

A. Grazing. None this period.

B. Haying. None this period.

C. Fur Harvest.

A trapping permit was issued to Mr. A. B. Rosendahl of Dunn Center, North Dakota for the taking of Mink, Muskrat, Raccoon, Weasel and Fox. Four Mink were trapped and shared on a 50-50 basis. The trapper received \$12.00 each for his Mink. No Muskrat were trapped. Very few Skunk and Weasel were seen on the refuge; one Skunk was killed.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

No projects this period under this category.

VI. PUBLIC RELATIONS

A. Public Uses.

1. Hunting. None.

2. Fishing. An estimated 2000 man-days were expended in winter fishing. Approximately 40,000 Perch were taken.

3. Miscellaneous Use. The Lake Ilo Recreational area is maintained under cooperative agreement by Dunn County; it has been used very little this spring.

The trees planted in rows have been cultivated; a few more will be planted this spring. It is possible that the Boy Scouts will

assist with the tree planting and make a project of the planting and maintenance. The Scout Leader and Committeemen have been contacted and all are in favor of it.

DISTRICT IV. EASEMENTS

HIDDENWOOD

I. GENERAL.

On April 30 this easement refuge was visited by Messrs. Carlson and Huenecke from Des Lacs.

A portion of the concrete plug, placed in the outlet culvert by local sportsmen (in hopes of "improving" the lake) two years ago, was removed. This will permit the lake to return to near its former level and should allow the emergent vegetation to make a comeback. The high water of the past two years had ruined much of the formerly ideal waterfowl habitat and was beginning to drown out trees along the south shoreline.

II. WILDLIFE.

The following numbers of waterfowl were observed: 60 Mallards, 2 Gadwall, 60 Pintails, 2 Green-winged Teal, 11 Blue-winged Teal, 16 Shovelers, 8 Canvasbacks, 40 Scaup, 1 Bufflehead, 4 Ruddys and 19 Common Mergansers for a total of 223.

Other species noted included 17 White Pelicans, 20 Cormorants, 2 Horned Grebes, 1 Pied-billed Grebe, 2 Western Willets, 6 Lesser Yellowlegs, and 1 Marbled Godwit. No upland game species were seen.

No report has been received from the permittee trapper.

LAKE PATRICIA

Not visited during the period.

LEGION LAKE

I. GENERAL.

A small flow of water was going over the spillway at Legion on April 30 when the area was visited by Messrs. Carlson and Huenecke. The spillway is in very poor condition; no repair work is planned as this area will eventually be flooded by the Garrison Reservoir.

II. WILDLIFE.

Approximately 200 Mallards and Pintails, 150 Canvasbacks, 100 Scaup,

20 Ruddys, 6 Horned Grebes and 200 White Pelicans comprised the waterfowl population. This was far below the normal spring complement for this area. Usually quite a few geese stop over here but none were observed this year.

Other species observed included 2 Least Sandpipers, 2 Semi-palmated Sandpipers and 3 Myrtle Warblers.

No upland game birds or mammals were seen.

No report has been received on trapping.

McLEAN

I. GENERAL.

This area was also visited by Messrs. Carlson and Huenecke on April 30. The waterlevel was just at spillway crest.

Considerable work is planned for this area this spring; it will consist of hauling and placing riprap along the dike and roadway crossing the south end of the lake.

II. WILDLIFE.

Approximately 1140 ducks were observed: 90 Mallards, 16 Gadwall, 55 American Widgeon, 150 Pintails, 125 Green-winged Teal, 60 Blue-winged Teal, 20 Shovelers, 35 Redheads, one Ringneck (a rarer species for this part of North Dakota), 110 Canvasbacks, 190 Scaup, 10 Ruddys, 3 Common Mergansers, 7 Red-breasted Mergansers and 270 Coot.

Other species included 40 White Pelicans, 8 Horned Grebes, 2 Eared Grebes, 3 Pied-billed Grebes, 2 Common Snipe, 4 Western Willets and 20 Marbled Godwit. One Hudsonian Godwit was seen near Blaisdell on the trip to the easement.

No upland game species or mammals were seen. This area does support a good muskrat and mink population, however.

No report has been received from trappers.

PRETTY ROCK

I. GENERAL.

The waterlevel at the beginning of the period was two feet below spillway crest, according to the farmer living near the refuge. There was little precipitation in this area during this period and the run-off

was light. By April 13, when the refuge was visited, the waterlevel had only raised to 18 inches below crest.

The control structures are in fair condition. Some additional riprap is needed below the spillway, some on the dike and on the road across the west end of the refuge; this work will be done this spring.

II. WILDLIFE.

On April 13 the following ducks were observed: 700 Mallards, 6 Gadwall, 600 American Widgeon, 600 Pintails, 36 Green-winged Teal, 100 Blue-winged Teal, 75 Canvasbacks and 300 Scaup. Mr. Hockhalter, a farmer who lives on the refuge, reported that approximately 2000 geese were on the area during the first part of April; these consisted of Canadas, White-fronts and Snow Geese. This number of geese represents increased use compared with last year.

Only three Ring-necked Pheasants were observed on April 13, but it is estimated that about 75 utilize the refuge. A few Sharp-tailed Grouse and European Partridge also utilize this area.

No reports have been received from trappers.

STEWART LAKE

I. GENERAL.

Precipitation in this area was also below normal and the run-off was light. The waterlevel did rise from $2\frac{1}{2}$ feet below spillway crest at the beginning of the period to eight inches below crest by April 9, however. This was the second spring that water has not flowed out of Stewart Lake since the area was established (last spring was the other time).

II. WILDLIFE.

On April 9 the following birds were observed: 600 Mallards, 500 American Widgeon, 1200 Pintails, 8 Snow Geese, 7 Blue Geese, 300 White-fronted Geese and 3000 Sandhill Cranes. For the species present at that time this represents an increase in numbers over last year. It can probably be assumed that at least the usual numbers of other species also utilized the area. (Only one visit made this period so no other data available.)

It is believed that more Ring-necked Pheasants are present at Stewart Lake this year; more than there have been for the past several years. A few Sharp-tailed Grouse and European Partridge are also present.

Two trapping permits were issued to landowners on this area but no reports have been received.

WHITE LAKEI. GENERAL.

Precipitation was below normal for this area too. The waterlevel raised from two feet below spillway at the start of the period to a slight flow over the crest by the first of April, despite a light run-off.

On April 9 when the refuge was visited about one-half inch of water was flowing over. According to Mr. Koeffler, who lives on the refuge, the peak water height was two inches over spill.

There is some riprap needed on the dike which will be placed this year; otherwise the structures are in good condition.

II. WILDLIFE.

On April 9 the following were observed; 400 Mallards, 200 American Widgeon, 1000 Pintails, one Bald Eagle and two Ring-necked Pheasants.

Mr. Koeffler indicated that waterfowl usage was about the same as last year.

One trapping permit was issued for this area but no furs were taken.

=====

Note: NR-1's have not been prepared for the easements as we do not have sufficient data.

The above report for Lake Ilo and District IV Easements was based mainly on information submitted by Mr. Chesley M. Dinkins, Maintenance Man in charge at Ilo; some data were supplied by the refuge manager.

Mr. Dinkins is to be commended for the work progress made during the period, despite the handicap of working alone most of the time.

DISTRICT 4-A EASEMENT REFUGESCLEARWATER LAKE NATIONAL WILDLIFE REFUGEI. General.

Not visited during period.

II. Wildlife.

One trapping permit was issued last fall, but results were not reported.

No figures are available on waterfowl.

III. Physical Development.

None.

SHELL LAKE NATIONAL WILDLIFE REFUGEI. General.

Not visited during period.

II. Wildlife.

One trapping permit was issued last fall, but results were not reported.

No figures are available on waterfowl.

III. Physical Development.

None.

LAKE ZANL NATIONAL WILDLIFE REFUGEI. General.

The area was visited on February 25 with Mr. Huenecke of Des Lacs. Temperatures the preceding days were sufficiently high to cause a runoff of melted snow. Water was flowing over the spillway approximately six inches deep. The dike was examined to see if any further damage has been caused by burrowing animals. Repairs should be made at some time this year. Funds have been requested for this job in the Budget Estimate.

The upland areas in the refuge were inspected to get an idea of the area's capability for grazing and haying. A more thorough examination of the area will be made this summer and an Economic Use Plan

will be drawn up to provide for a few of the requests that have been received for haying and grazing.

II. Wildlife.

Three trapping permits were issued last fall. Two of the trappers reported a take of six Mink and sixty-eight Muskrats; no report was received from the third trapper.

There are no figures available on waterfowl.

III. Physical Development.

None.

WATERFOWL

REFUGE Lake Ilo

MONTHS OF January TO April, 19 54

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard	500	160	160			60	60	60	60	60
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

WATERFOWL
(Continuation Sheet)

REFUGE		Lake Ilo		MONTHS OF January TO April, 1954									
		(2)								(3)		(4)	
		Weeks of reporting period								Estimated		Production	
(1)		11	12	13	14	15	16	17	18	waterfowl	Broods:Estimated	seen	total
Species										days use			
Swans:													
Whistling													
Trumpeter													
Geese:													
Canada						62				454			
Cackling													
Brant													
White-fronted						180	15			1,385			
Snow						150	300	400		5,980			
Blue							30	13		301			
Other													
Ducks:													
Mallard		60	300	300	2000	2000	1000	400	400	53,060			
Black													
Gadwall							50	50	100	1,400			
Baldpate						800	300	400	700	18,900			
Pintail			60	400	400	5000	300	500	200	48,020			
Green-winged teal					50	40	50	40	200	2,680			
Blue-winged teal							450	200	1500	15,050			
Cinnamon teal													
Shoveler							50	500	1500	12,950			
Wood													
Redhead							200	300	600	7,000			
Ring-necked									20	140			
Canvasback							200	50	500	5,250			
Scaup							500	2000	2000	31,800			
Goldeneye							10	10	20	280			
Bufflehead							10	10	20	280			
Ruddy									150	1,050			
Other (Mergansers)					20	200	300	50		3,990			
Coot:													
									1500	10,500			
(over)													

54

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas <u>Entire Area.</u>
Geese	8,050	413	:	
Ducks	201,550	9,110	:	Principal nesting areas
Coots	10,500	1,500	:	
				Reported by <u>C. M. Dinkins</u>

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Lake Ilo

Months of January to April 1954

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use-Days
I. Water and Marsh Birds:										
Red-necked Grebe	2	4/29	10	4/29	2	4/29				20
Horned Grebe	200	4/29	200	4/29	200	4/29				600
Eared Grebe	3	4/28	30	4/29-30	30	4/29				200
Pied-billed Grebe	50	4/29	50	4/29-30	50	4/29				100
White Pelican	140	4/11	140	4/11-15	40	4/30				1,300
Double-crested Cormorant	2	4/21	10	4/23-30	3	4/30				70
Great-blue Heron	2	4/6	5	4/21-30	2	4/30				60
American Bittern	1	4/29	6	4/25-30	1	4/29				10
Sandhill Crane	2000	4/4	2000	4/4-10	200	4/10				10,000
II. Shorebirds, Gulls and Terns:										
Killdeer	3	4/3	100	4/15-30	Common					
Common Snipe	40	4/29	40	4/29-30						
Upland Sandpiper	10	4/23	10	4/23-30	Common					
Western Willet	3	4/21	10	4/23-30	Common					
Lesser Yellow-legs	200	4/29	200	4/29-30						
Dowitcher	20	4/29	20	4/29-30						
Marbled Godwit	10	4/29	10	4/29						
Avocet	None seen									
Ring-billed Gull	5	4/5	50	4/20-30	Common					
Franklin's Gull	40	4/19	2000	4/20-30	Common					

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	2	4/12	30	4/20-30	Common
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	Common				
Duck hawk	None seen.				
Horned owl	Common	4	Common		
Magpie	Common in vicinity, none seen on refuge.				
Raven					
Crow	3	3/24	2000	4/1-20	Common
Red-tail Hawk	1	4/15	1	4/15 -	
Am. Rough-legged Hawk	Common		6	4/1-30	
Bald Eagle	1	3/20	1	3/20 -	1 3/29
Marsh Hawk	1	3/20	15	4/20-30	
Prairie Falcon	Common		4	1/1-2/30	
Sparrow Hawk	2	4/3	10	4/1-20	
Snowy Owl	1	1/1	3	1/1-2/30	1 3/9
Reported by G. M. Dinkins					

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

UPLAND GAME BIRDS

1613

Refuge Lake Ilo and District IV Easements Months of January to April, 19 54

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specificioally requested. List introductions here.
<u>Lake Ilo</u>										
Sharp-tailed Grouse									20	
European Partridge									20	
Ring-necked Pheasant					1M-3FM				250	
<u>Pretty Rock</u>										
Sharp-tailed Grouse									20	
European Partridge									20	
Ring-necked Pheasant									75	
<u>Stewart Lake</u>										
Sharp-tailed Grouse									40	
European Partridge									40	
Ring-necked Pheasant									10	
<u>White Lake</u>										
Sharp-tailed Grouse									20	
European Partridge									10	
Ring-necked Pheasant									10	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge Lake Ilo & District IV Easements

Year ending April 30, 1954

(1) *Species	(2) Density	(3) Removals	(4) Disposition of Furs						(5) Total Popula- tion Estimate					
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Muskrat	<u>Lake Ilo</u>			None										200
Mink				4					2	2				25
Weasel				None										6
Beaver	3 destroyed - doing damage to trees in Park.													2
Skunk	1 destroyed			None										10
Badger				None										2
Raccoon				None										2
Fox				None										4
Coyote				0										0
House Cat				None										2
Cotton-tail Rabbit				None										20
Jack Rabbit				None										50
	<u>Hiddenwood</u>													
	Trapping not reported.													
Muskrat														50
Mink														10
Skunk														10
Badger														4
Fox														2
Coyote														0
* List removals by Predator Animal Hunter														

* List removals by Predator Animal Hunter

REMARKS:

Reported by C. M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.

REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

3-1754
Form NR-4
(June 1945)

Continued
SMALL MAMMALS

Refuge Lake Ile & District IV Easements

Year ending April 30, 1954

(1) Species	(2) Density	(3) Removals						(4) Disposition of Furs						(5) Total Popula- tion
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
	<u>Legion Lake</u> Not visited Trapping not reported.								No. 78					
	<u>Lake McLean</u> Not visited Trapping not reported.								78-80					
	<u>Pretty Rock</u> Trapping not reported.								77					
Muskrat														300
Mink														10
Skunk														5
Weasel														4
Badger														2
	<u>Stewart Lake</u> Trapping not reported.								81					20
Muskrat														5
Mink														5
Skunk														6
Weasel														4
Coyote	Common in vicinity.													
* List removals by Predator Animal Hunter														

* List removals by Predator Animal Hunter

REMARKS:

Reported by C. M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
 - (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
 - (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
 - (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Continued

Refuge Lake Ilo & District IV Easements

Year ending April 30, 1954

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total	Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
	Acreage of Habitat							Permit Number	Trappers Share	Refuge share				
Muskrat Mink Skunk Weasel Jack Rabbit House Cat	White Lake None trapped.							No. 76						10 3 3 2 2

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by C. M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.

REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

REFUGE GRAIN REPORT

Refuge Lake Ilo

Months of January through April, 1954

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat	105	none	105			10					95
Barley	200	none	200			10					190

(8) Indicate shipping or collection points _____

(9) Grain is stored at Lake Ilo Refuge and Tom Donohoe Farm on Refuge.

(10) Remarks Twenty bushels were fed to Pheasants.

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.